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PATENTS

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Appl. No. 09/870,690
Applicant(s): HIROSHI OKADA, ET AL.
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Examiner: Tam D. Tran
Title: IMAGE CUT-AWAY/DISPLAY SYSTEM

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MAIL STOP AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR RECONSIDERATION

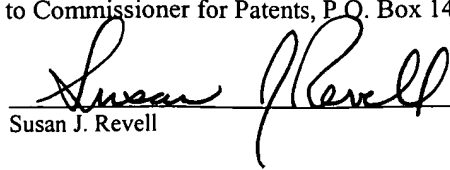
The present Amendment is filed together with a two-month extension of time.

The rejection of Claims 1 to 14, under 35 U.S.C. § 102(e) as anticipated by *Usuki* (U.S. 6,239,771), is traversed and reconsideration is respectfully requested.

The present invention relates to an image cut-away/display system that offers in a timely manner a plurality of users in vehicles, such as automobiles, trains and aircraft with high quality images of their exterior surroundings. Outside view data is very helpful for drivers or pilots because outside views are frequently very limited or completely obscured due to the positions of the crew members. Thus, the system of the present invention provides an image cut-away/display system containing a plurality of image taking means for taking images in a continuous view area, means for combining the images taken by the image taking means to form a single wide-area view image. View-point data generating means generates view-point data for each of the users and image cut-away means are provided for cutting away images for each user from the single wide-area view image based on the view-point data for each user.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 20, 2004.


Susan J. Revell

The image display means are then used to display the cut-away images for each user at a view-point of each user. This is illustrated in the drawings, particularly Figure 2, which shows the camera arrangement according to the present invention, and Figure 4 which shows the processing from a combination of images to an image cut-away.

The present invention features a view-point data generating means for generating view-point data for each of the users based on the motion of the eyeballs of each of the users. This is described in the application, page 3, lines 9 to 20, and pointed out in the claims submitted herewith.

Claim 10 defines an image taking-out and displaying system which can be installed in a head-up display for use in vehicles such as automobiles, trains and aircrafts, and is not for use in games in three-dimensional space such as described in *Usuki* (US 6,239,771). The Official Action of June 20, 2004, did not acknowledge this point.

No image combining means is disclosed by *Usuki*. The *Usuki* device is used for games in three-dimensional space. No image-combining technique is required for an image to be three-dimensionally viewed for both eyes.

There is no disclosure in *Usuki* of the image cut-way means. In particular, the wording “a part being cut away” in col. 20, at line 1 of *Usuki*, means that the image display units 850 is shown in a cut-away drawing in Fig. 35. In Fig. 35, for example, two shafts 666A and 666B, col. 20, lines 26 and 27, are shown, whereas they are not shown in Fig. 36 because this is not a cut-away drawing.

Column 20, lines 5 to 17 of *Usuki* describe the structure of the image display units 850 equipped with the cylindrical right and left image display units 650R and 650L, the liquid-crystal display panels 7R and 7L provided at their respective front ends, and the magnifying lenses 652R and 652L at the other ends.

In Claim 10, the image cut-away means is renamed image editing means that is electro-optically connected to the memory means and the viewpoint-information data outputting means for taking out necessary images for each operator from the single wide area view image based on the viewpoint-information data and for displaying the images for each operator as required so as to promptly and exactly present the images with a high quality at an adequately required position.

The image cut-away means or the editing means is to edit the single wide area view image based on the viewpoint-information data to cut away or take out images for each user or operator. There is no disclosure of such image editing in col. 20, lines 5 to 17, of *Usuki*.

Neither is there a disclosure of the image displaying means in *Usuki*. The *Usuki* device displays an image so that it can be three-dimensionally viewed for both eyes of a person who puts on the device.

In contrast, according to the present invention, suppose that there are three persons as the crew of an aircraft, one watching the right-side views, another watching the center views, and still another watching the left-side views. The image cut-away means or image editing means cuts away or takes out necessary images (right-side images, center images and left-side images) for the crew from the single wide area view image based on the viewpoint-information data. The image display means displays for example, the right-side images for the person watching right-side views.

Applicants respectfully submit that the system of *Usuki* does not provide view-point data generating means based on the motion of the eyeballs of each of the users.

In addition, Claims 11 to 13 call for a plurality of cameras mounted in the vehicle for taking continuous pictures of a wide range of surroundings without a rift and an image cut-away means for editing the continuous image so as to make optimum use thereof for the crew member through the view-point information.

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Resp. to Office Action of May 20, 2004

The cited reference of *Usuki* does not disclose a plurality of cameras mounted on a vehicle for taking continuous pictures of a wide range of surroundings without a rift and also the image cut-away means. The *Usuki* reference fails to anticipate the claimed invention.

Consequently, it is respectfully submitted that the cited reference does not create anticipation of the presently claimed invention.

For reasons set forth above, applicants respectfully submit that the application is in condition for allowance and, therefore, favorable action at the Examiner's earliest convenience is respectfully requested.

Respectfully submitted,

SMITH, GAMBRELL & RUSSELL, LLP

By: 

Robert G. Weilacher, Reg. No. 20,531

Suite 3100, Promenade II
1230 Peachtree Street, N.E.
Atlanta, Georgia 30309-3592
Telephone: (404) 815-3593
Facsimile: (404) 685-6891